AMENDED IN ASSEMBLY JUNE 1, 2009

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AMENDED IN ASSEMBLY MARCH 18, 2009

CALIFORNIA LEGISLATURE—2009–10 REGULAR SESSION

# ASSEMBLY BILL No. 44

**Introduced by Assembly Member Blakeslee**
**(Coauthor: Assembly Member Harkey)**
(Coauthor: Senator Benoit)

December 1, 2008

An act to *amend Section 454.5 of, to* add Section 454.35 to, and to add Chapter 7.7 (commencing with Section 2835) to Part 2 of Division 1 of, the Public Utilities Code, relating to energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 44, as amended, Blakeslee. Energy storage facilities.

(1) Under existing law, the Public Utilities Commission is vested with regulatory authority over public utilities, including electrical corporations, and the commission is authorized to fix the rates and charges for every public utility. Existing law authorizes the commission to approve an increase of ~~one-half of 1 percent to 1 percent~~ *½ of 1% to 1%* in the rate of return otherwise allowed an electrical corporation for investment by the corporation in generation facilities using renewable resources.

This bill would authorize the commission, after a hearing, to approve a similar increase in the rate of return for investment by a corporation in energy storage ~~facilities~~ *systems*, as defined, that (A) are used and useful, (B) have costs of construction and operation over their useful life that are less than other facilities that provide load shifting, voltage

support, and scheduling and shaping services for intermittent renewable energy resources, and (C) perform any of 4 specified purposes.

~~The bill would require the commission to develop a time-variant tariff that creates incentives for eligible energy storage facilities.~~

*(2) The existing Public Utilities Act requires the commission to review and adopt a procurement plan for each electrical corporation in accordance with specified elements, incentive mechanisms, and objectives. The elements, among other things, require that the plan include a showing that the electrical corporation will, in order to fulfill its unmet resource needs, until a 20% renewable resources portfolio is achieved, procure renewable energy resources with the goal of ensuring that at least an additional 1% per year of the electricity sold by the electrical corporation is generated from eligible renewable energy resources, provided sufficient funds are made available to cover certain above-market costs.*

*This bill would require that an electrical corporation's proposed procurement plan include a showing that the electrical corporation will, in order to fulfill its unmet resource needs, procure resources from eligible renewable energy resources in an amount sufficient to meet its procurement requirements pursuant to the renewables portfolio standard established pursuant to the California Renewables Portfolio Standard Program. The bill would add a requirement that the procurement plan include a showing that the electrical corporation will incorporate cost-effective, reliable, and feasible energy storage systems, both centralized and distributed, that reduce emissions of greenhouse gases, or reduce demand for peak electrical generation, or improve the reliable operation of the electrical grid.*

~~Under~~

*(3) Under* existing law, a violation of the Public Utilities Act or an order ~~or direction~~*, decision, rule, direction, demand, or requirement* of the commission is a crime. Because *certain of* the provisions of this bill ~~would require an order or other action of the commission to implement, and a violation of that order or action would be a crime, the bill would impose a state-mandated local program by creating a new crime~~ *are within the act and require action by the commission to implement its requirements, a violation of these provisions would impose a state-mandated local program by creating a new crime*.

~~(2)~~ The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: yes.

*The people of the State of California do enact as follows:*

SECTION 1. Section 454.35 is added to the Public Utilities Code, to read:

454.35. The commission, after a hearing, may approve an increase of one-half of 1 percent to 1 percent in the rate of return otherwise allowed an electrical corporation for investment by the corporation in energy storage ~~facilities~~ *systems* that meet all of the following requirements:

(a) The ~~facility~~ *energy storage system* is used and useful.

(b) The ~~facility's~~ *energy storage system's* costs of construction and operation over its useful life are less than the costs of construction and operation of other facilities that provide load shifting, voltage support, and scheduling and shaping services for intermittent renewable energy resources, taking into account the costs of emissions of greenhouse gases and other air emissions from those other facilities.

(c) The ~~facility~~ *energy storage system* does one of the following:

(1) The ~~facility~~ *energy storage system* stores energy generated from an eligible renewable energy resource pursuant to Article 16 (commencing with Section 399.11) of Chapter 2.3.

(2) The ~~facility is capable of responding to Independent System Operator commands to either absorb or dispatch energy from the grid~~ *energy storage system is capable of responding to dispatch and market protocols for grid reliability and stability* and is capable of storing the energy for a minimum of two hours.

(3) The ~~facility~~ *energy storage system* is capable of providing frequency or area control error regulation required to integrate intermittent renewable resources and maintain reliable operation of the electrical grid.

(4) The ~~facility~~ *energy storage system* stores energy during off-peak periods and dispatches the energy during on-peak periods *or to provide ancillary services*.

*SEC. 2. Section 454.5 of the Public Utilities Code is amended to read:*

454.5. (a) The commission shall specify the allocation of electricity, including quantity, characteristics, and duration of electricity delivery, that the Department of Water Resources shall provide under its power purchase agreements to the customers of each electrical corporation, which shall be reflected in the electrical corporation's proposed procurement plan. Each electrical corporation shall file a proposed procurement plan with the commission not later than 60 days after the commission specifies the allocation of electricity. The proposed procurement plan shall specify the date that the electrical corporation intends to resume procurement of electricity for its retail customers, consistent with its obligation to serve. After the commission's adoption of a procurement plan, the commission shall allow not less than 60 days before the electrical corporation resumes procurement pursuant to this section.

(b) An electrical corporation's proposed procurement plan shall include, but not be limited to, all of the following:

(1) An assessment of the price risk associated with the electrical corporation's portfolio, including any utility-retained generation, existing power purchase and exchange contracts, and proposed contracts or purchases under which an electrical corporation will procure electricity, electricity demand reductions, and electricity-related products and the remaining open position to be served by spot market transactions.

(2) A definition of each electricity product, electricity-related product, and procurement related financial product, including support and justification for the product type and amount to be procured under the plan.

(3) The duration of the plan.

(4) The duration, timing, and range of quantities of each product to be procured.

(5) A competitive procurement process under which the electrical corporation may request bids for procurement-related services, including the format and criteria of that procurement process.

(6) An incentive mechanism, if any incentive mechanism is proposed, including the type of transactions to be covered by that mechanism, their respective procurement benchmarks, and other parameters needed to determine the sharing of risks and benefits.

(7) The upfront standards and criteria by which the acceptability and eligibility for rate recovery of a proposed procurement transaction will be known by the electrical corporation prior to execution of the transaction. This shall include an expedited approval process for the commission's review of proposed contracts and subsequent approval or rejection thereof. The electrical corporation shall propose alternative procurement choices in the event a contract is rejected.

(8) Procedures for updating the procurement plan.

(9) A showing that the procurement plan will achieve the following:

(A) The electrical corporation will, in order to fulfill its unmet resource ~~needs and in furtherance of Section 701.3, until a 20 percent renewable resources portfolio is achieved, procure renewable energy resources with the goal of ensuring that at least an additional 1 percent per year of the electricity sold by the electrical corporation is generated from renewable energy resources, provided sufficient funds are made available pursuant to Sections 399.6 and 399.15, to cover the above-market costs for new renewable energy resources~~ *needs, procure resources from eligible renewable energy resources in an amount sufficient to meet its procurement requirements and goals pursuant to the renewables portfolio standard.*

(B) The electrical corporation will create or maintain a diversified procurement portfolio consisting of both short-term and long-term electricity and electricity-related and demand reduction products.

(C) The electrical corporation will first meet its unmet resource needs through all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible.

*(D) The electrical corporation will incorporate cost-effective, reliable, and feasible energy storage systems, both centralized and distributed, that reduce emissions of greenhouse gases, or reduce demand for peak electrical generation, or improve the reliable operation of the electrical grid.*

(10) The electrical corporation's risk management policy, strategy, and practices, including specific measures of price stability.

(11) A plan to achieve appropriate increases in diversity of ownership and diversity of fuel supply of nonutility electrical generation.

(12) A mechanism for recovery of reasonable administrative costs related to procurement in the generation component of rates.

(c) The commission shall review and accept, modify, or reject each electrical corporation's procurement plan. The commission's review shall consider each electrical corporation's individual procurement situation, and shall give strong consideration to that situation in determining which one or more of the features set forth in this subdivision shall apply to that electrical corporation. A procurement plan approved by the commission shall contain one or more of the following features, provided that the commission may not approve a feature or mechanism for an electrical corporation if it finds that the feature or mechanism would impair the restoration of an electrical corporation's creditworthiness or would lead to a deterioration of an electrical corporation's creditworthiness:

(1) A competitive procurement process under which the electrical corporation may request bids for procurement-related services. The commission shall specify the format of that procurement process, as well as criteria to ensure that the auction process is open and adequately subscribed. Any purchases made in compliance with the commission-authorized process shall be recovered in the generation component of rates.

(2) An incentive mechanism that establishes a procurement benchmark or benchmarks and authorizes the electrical corporation to procure from the market, subject to comparing the electrical corporation's performance to the commission-authorized benchmark or benchmarks. The incentive mechanism shall be clear, achievable, and contain quantifiable objectives and standards. The incentive mechanism shall contain balanced risk and reward incentives that limit the risk and reward of an electrical corporation.

(3) Upfront achievable standards and criteria by which the acceptability and eligibility for rate recovery of a proposed procurement transaction will be known by the electrical corporation prior to the execution of the bilateral contract for the transaction. The commission shall provide for expedited review and either approve or reject the individual contracts submitted by the electrical corporation to ensure compliance with its procurement plan. To

the extent the commission rejects a proposed contract pursuant to this criteria, the commission shall designate alternative procurement choices obtained in the procurement plan that will be recoverable for ratemaking purposes.

(d) A procurement plan approved by the commission shall accomplish each of the following objectives:

(1) Enable the electrical corporation to fulfill its obligation to serve its customers at just and reasonable rates.

(2) Eliminate the need for after-the-fact reasonableness reviews of an electrical corporation's actions in compliance with an approved procurement plan, including resulting electricity procurement contracts, practices, and related expenses. However, the commission may establish a regulatory process to verify and assure that each contract was administered in accordance with the terms of the contract, and contract disputes which may arise are reasonably resolved.

(3) Ensure timely recovery of prospective procurement costs incurred pursuant to an approved procurement plan. The commission shall establish rates based on forecasts of procurement costs adopted by the commission, actual procurement costs incurred, or combination thereof, as determined by the commission. The commission shall establish power procurement balancing accounts to track the differences between recorded revenues and costs incurred pursuant to an approved procurement plan. The commission shall review the power procurement balancing accounts, not less than semiannually, and shall adjust rates or order refunds, as necessary, to promptly amortize a balancing account, according to a schedule determined by the commission. Until January 1, 2006, the commission shall ensure that any overcollection or undercollection in the power procurement balancing account does not exceed 5 percent of the electrical corporation's actual recorded generation revenues for the prior calendar year excluding revenues collected for the Department of Water Resources. The commission shall determine the schedule for amortizing the overcollection or undercollection in the balancing account to ensure that the 5 percent threshold is not exceeded. After January 1, 2006, this adjustment shall occur when deemed appropriate by the commission consistent with the objectives of this section.

(4) Moderate the price risk associated with serving its retail customers, including the price risk embedded in its long-term supply contracts, by authorizing an electrical corporation to enter into financial and other electricity-related product contracts.

(5) Provide for just and reasonable rates, with an appropriate balancing of price stability and price level in the electrical corporation's procurement plan.

(e) The commission shall provide for the periodic review and prospective modification of an electrical corporation's procurement plan.

(f) The commission may engage an independent consultant or advisory service to evaluate risk management and strategy. The reasonable costs of any consultant or advisory service is a reimbursable expense and eligible for funding pursuant to Section 631.

(g) The commission shall adopt appropriate procedures to ensure the confidentiality of any market sensitive information submitted in an electrical corporation's proposed procurement plan or resulting from or related to its approved procurement plan, including, but not limited to, proposed or executed power purchase agreements, data request responses, or consultant reports, or any combination, provided that the Office of Ratepayer Advocates and other consumer groups that are nonmarket participants shall be provided access to this information under confidentiality procedures authorized by the commission.

(h) Nothing in this section alters, modifies, or amends the commission's oversight of affiliate transactions under its rules and decisions or the commission's existing authority to investigate and penalize an electrical corporation's alleged fraudulent activities, or to disallow costs incurred as a result of gross incompetence, fraud, abuse, or similar grounds. Nothing in this section expands, modifies, or limits the State Energy Resources Conservation and Development Commission's existing authority and responsibilities as set forth in Sections 25216, 25216.5, and 25323 of the Public Resources Code.

(i) An electrical corporation that serves less than 500,000 electric retail customers within the state may file with the commission a request for exemption from this section, which the commission shall grant upon a showing of good cause.

(j) (1) Prior to its approval pursuant to Section 851 of any divestiture of generation assets owned by an electrical corporation on or after the date of enactment of the act adding this section, the commission shall determine the impact of the proposed divestiture on the electrical corporation's procurement rates and shall approve a divestiture only to the extent it finds, taking into account the effect of the divestiture on procurement rates, that the divestiture is in the public interest and will result in net ratepayer benefits.

(2) Any electrical corporation's procurement necessitated as a result of the divestiture of generation assets on or after the effective date of the act adding this subdivision shall be subject to the mechanisms and procedures set forth in this section only if its actual cost is less than the recent historical cost of the divested generation assets.

(3) Notwithstanding paragraph (2), the commission may deem proposed procurement eligible to use the procedures in this section upon its approval of asset divestiture pursuant to Section 851.

~~SEC. 2.~~

*SEC. 3.* Chapter 7.7 (commencing with Section 2835) is added to Part 2 of Division 1 of the Public Utilities Code, to read:

## CHAPTER 7.7. ENERGY STORAGE SYSTEMS

~~2835. This chapter shall be known and may be cited as the Integration of Renewable Energy Act.~~

~~2835.2.~~

*2835.* For the purposes of this chapter the following terms have the following meanings:

(a) "Energy storage system" means any technology that is capable of absorbing energy from a generation facility, storing it for a period of time, and dispatching the energy onto the grid. Energy storage systems include, but are not limited to, hydrogen storage, pumped hydroelectricity storage, compressed air energy storage, thermal storage, solar thermal storage superconducting magnetic energy storage, batteries, super capacitors, and flywheels.

(b) "Eligible storage~~ facility" or "eligible facility"~~ *system"* means any facility that employs an energy storage technology that meets at least one of the following requirements:

(1) The ~~facility~~ *energy storage system* stores energy generated from an eligible renewable energy resource pursuant to Article 16 (commencing with Section 399.11) of Chapter 2.3.

(2) The ~~facility is capable of responding to Independent System Operator commands to either absorb or dispatch energy from the grid~~ *energy storage system is capable of responding to dispatch and market protocols for grid reliability and stability* and is capable of storing the energy for a minimum of two hours.

(3) The ~~facility~~ *energy storage system* provides frequency or area control error regulation required to integrate intermittent renewable resources and maintain reliable operation of the electrical grid.

(4) The ~~facility~~ *energy storage system* stores energy during off-peak periods and dispatches the energy as electricity during on-peak periods *or to provide ancillary services*.

~~2835.4.~~

*2835.2.* The Legislature finds and declares all of the following:

(a) Energy storage systems can potentially enable higher percentages of renewable energy to be included in California's power supply portfolio by transforming intermittent generation, such as wind and solar power, into dispatchable resources, allowing the state to more fully utilize its abundant renewable resources.

(b) Energy storage systems can serve as load shifting technologies by absorbing ~~energy during off-peak periods~~ *intermittent energy*, such as from wind resources at night, and delivering the energy when demand is greatest, thereby potentially reducing the need for, and associated greenhouse gas emissions from, gas-fired peaker plants.

(c) Energy storage systems can greatly enhance the flexibility of the operation of the power grid by quickly absorbing or dispatching energy when needed.

(d) Energy storage systems that have an inverter can deliver reactive power as well as real power. This is particularly useful when the storage systems are located in load centers as they can help support the voltage in a transmission-constrained area.

(e) It is the intent of the Legislature to facilitate the expansion and deployment of ~~both customer-owned~~ *customer-owned, third-party-owned,* and utility-owned energy storage systems, which are critical to the timely and cost-effective achievement of the state's ambitious renewables portfolio standard, greenhouse

gas emissions reduction targets, and regional air quality objectives while maintaining reliable operation of the power grid.

~~2835.6. The commission shall develop a time-variant tariff that creates appropriate incentives for eligible storage facilities and provides incentives to invest in energy storage facilities. The tariff developed pursuant to this section shall not result in ratepayers paying increased costs for energy storage facilities that exceed the economic benefits provided by the energy storage facilities through load shifting, voltage support, and scheduling and shaping services for renewable energy resources.~~

*2835.4. Electricity generated by an eligible renewable energy resource meeting the requirements of the California Renewables Portfolio Standard Program (Article 15 (commencing with Section 399.11) of Part 1 of Division 1) that is stored by an eligible storage system prior to its use to serve end-use retail customers located within the state is "delivered" electricity pursuant to that program.*

~~SEC. 3.~~

*SEC. 4.* No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

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